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**PRE-APPEAL BRIEF REQUEST FOR REVIEW**

Docket Number (Optional)

ITO.0045US (P16093)

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on May 4, 2007

Signature

Typed or printed  
nameCynthia L. Hayden

Application Number

10/634,130

Filed

August 4, 2003

First Named Inventor

Brian G. Johnson

Art Unit

2818

Examiner

Thao P. Le

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.

This request is being filed with a notice of appeal.

The review is requested for the reason(s) stated on the attached sheet(s).

Note: No more than five (5) pages may be provided.

I am the

☐

applicant/inventor.

☐

assignee of record of the entire interest.

See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed.  
(Form PTO/SB/96)☒

attorney or agent of record.

Registration number 28-994☐

attorney or agent acting under 37 CFR 1.34.

Registration number if acting under 37 CFR 1.34 \_\_\_\_\_

Signature

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Typed or printed name

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Telephone number

May 4, 2007

Date

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below\*.

☒\*Total of 1 forms are submitted.

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Applicant:

Brian G. Johnson et al.

Serial No.: 10/634,130

Filed: August 4, 2003

For: Multilayered Phase  
Change Memory

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Art Unit: 2818

Examiner: Thao P. Le

Docket: ITO.0045US  
P16093

Assignee: Intel Corporation

Mail Stop AF  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**STATEMENT IN SUPPORT OF**  
**PRE-APPEAL BRIEF REQUEST FOR REVIEW**

Sir:

The rejection is premised on the improbable proposition that a rationale to modify a reference which does not teach the claimed invention could be supplied by a second reference which also teaches away in the same way as the first reference. In other words, two references that teach not doing what is claimed are somehow combined to teach what is claimed. It is respectfully submitted that a *prima facie* rejection is not made out.

Khoury, like Parkinson and Lowrey, all teach using programmable phase change memory elements that change between amorphous and crystalline phases. Khoury, in particular, suggests that better current flow can be obtained in the crystalline phase. But he explicitly teaches that the way the memory works is to reversibly switch between crystalline and amorphous phases. See paragraphs 5, 8, 13, and 14, as examples. Thus, Khoury, like all of the other cited references, does not teach a substantially crystalline, non-switching ovonic material. Instead, he teaches a

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*Cynthia L. Hayden*  
Cynthia L. Hayden


conventional ovonic material that switches between amorphous and crystalline phases. The fact that he mentions that there is less resistance in the crystalline phase is noted, but the rationale to modify goes against the very teaching of Khouri himself. If it was so good to stay in the crystalline phase, why did Khouri not stay in the crystalline phase? The answer is that he saw no reason to do so. And this is the fundamental defect in the rejection. It combines two references that saw no reason to do what is claimed and attempts to add them together and come up with something different than their sum. This is impermissible and logically and legally untenable.

The problem Khouri would see is why would I want to make a memory cell which only conducts? Then it could not store any information. He would have no reason to believe that it would be good to make a cell which includes a non-changing memory element. The claim requires a combination of a substantially crystalline, non-switching ovonic material and a switching phase change material. No such structure is suggested. The fact that Parkinson or anyone else suggested a non-switching amorphous material does not tell how or why to make a non-switching, crystalline material.

Therefore, the rejection should be reconsidered.

Respectfully submitted,

Date: May 4, 2007



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